Certificate of Compliance

Certificate Number:

[2025-12-03- E523173]

Report Reference:

E523173-Report Date / E523173- 20251203-DescriptionFS.docx

Issue Date:

2025-12-03

Issued to:

Nanotec Electronic GmbH & Co.
Kapellenstrasse 6
Feldkirchen bei München, 85622 DE

This certificate confirms that representative samples of:

Motor Drive System N6-x-y-1-S

where x = 1 or 2, y = 1 or 2 or 3 or 4 or 5 or 10 or 13, has been evaluated by UL LLC and/or ULC Inc. in accordance with Standard(s) for Safety:

EN 61800-5-2, Adjustable speed electrical power drive systems - Part 5-2. Issue Date 04/2017
IEC 61800-5-2, Adjustable speed electrical power drive systems - Part 5-2. Ed.2, Issue Date 04/2016
UL 61800-5-2, Adjustable Speed Electrical Power Drive Systems Part 5-2. Ed.2, Issue Date 05/03/2022
EN ISO 13849-1, Safety of machinery - Safety-related parts of control systems Part 1, Issue Date 05/17/2023
EN ISO 13849-2, Safety of machinery - Safety-related parts of control systems Part 2. Issue Date 10/2012.

Additional Information:
See UL Product iQ® at https://iq.ulprospector.com for additional information.

This Certificate of Compliance indicates that representative samples of the product described in the certification report have met the requirements for UL certification. It does not provide authorization to apply the UL Mark and/or ULC Mark. Only the Authorization Page that references the Follow-Up Services Procedure for ongoing surveillance provides authorization to apply the UL Mark and/or ULC Mark.

Only those products bearing the UL Mark and/or ULC Mark should be considered as being UL Certified and/or ULC Certified and covered under UL's Follow-Up Services.

Look for the UL Certification Mark and/or ULC Certification Mark on the product.

David Piecuch
UL Mark Certification Program Owner
UL LLC

Gunsimar Paintal
ULC Mark Certification Program Manager
Underwriters Laboratories of Canada Inc.

Any information and documentation involving ULC Mark services are provided on behalf of Underwriters Laboratories of Canada Inc. (ULC) or any authorized licensee of ULC. For questions, please contact UL Solutions Customer Service at https://www.ul.com/contact-us.

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Safety Function	Parameters
Safe torque off (STO) [See Note 1] This function prevents force-producing power from being provided to the motor. This safety sub-function corresponds to an uncontrolled stop in accordance with stop category 0 of IEC 60204-1.	SIL capability 3 (IEC/EN/UL 61800-5-2) PLe (EN ISO 13849-1)

IEC / EN / UL 61800-5-2 results		
Product Type	A	
Safe Failure Fraction (SFF)	98.2%	HFT = 1
Dangerous Detected Failures / hr (λ_{DD})	1.70E-07	
Dangerous Undetected Failures / hr (λ_{DU})	5.24E-09	
Safe Failures / hr (λ_S)	1.16E-07	
Diagnostic Coverage (DC)	97%	
PFH_d	5.24E-09	
Systematic Capability	SC3	
ISO 13849 results		
MTTFd	571	
DC avg	97%	
Category	3	
PL Achieved	PL e	

[Note 1] The STO function of the N6-S product requires an external safety PLC, which is not included in the product itself. This PLC must fulfil the requirements and perform the periodic tests of the STO function as described in the safety manual.

This is to certify that representative samples of the product, as specified on this certificate, were assessed according to the current UL requirements.

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